AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A [[In a]] method for transmitting a signal from a sensor put in the human body to the outside of the human body, ~~a method for data communication in the human body,~~ the method comprising ~~the steps of~~:

generating electric potential difference between transmitting electrodes ~~comprising a first transmitting electrode having higher electric potential and a second transmitting electrode having lower electric potential,~~ installed on the surface of [[a]] the sensor;

supplying a conduction current from [[the]] a first transmitting electrode having higher electric potential to the inside of the human body to flow the current through the surface of the human body back into the inside of the human body and sinking the current to [[the]] a second transmitting electrode having lower electric potential; and

inducing a voltage between receiving electrodes installed on the surface of the human body by the current flowing through the surface of the human body.

2. (Canceled)

3. (Currently Amended) A system for data communication in the human body, the system comprising:

a sensor, which is put in the human body, and having transmitting electrodes installed on the surface of the sensor configured to be electrically isolated and configured to generate ~~for generating~~ electric potential difference; and

a receiver installed on the surface of the human body configured to receive a conduction current generated by the electric potential difference through the human body.

4. (Currently Amended) The system of claim 3, wherein the transmitting electrodes are installed on the surface of the sensor configured to be electrically isolated.

5. (Previously Presented) The system of claim 3, wherein the transmitting electrodes are electrically connected with an internal circuit of the sensor to receive an electric signal generated from the internal circuit.

6. (Previously Presented) The system of claim 4, wherein the transmitting sensor is three-dimensionally formed.

7. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode and a second electrode which surround both ends of the sensor.

8. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode surrounding an end of the sensor and a second electrode covering the other end of the sensor as a band shape.

9. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode and a second electrode respectively covering both ends of the sensor as a band shape.

10. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode and a second electrode symmetrically formed along a longer axis of the sensor.

11. (Previously Presented) The system of claim 3, wherein the surface of the sensor for isolating of the transmitting electrodes is made of one of peek, polyethylene and polypropylene.

12. (Previously Presented) The system of claim 11, wherein the surface of the sensor for isolating of the transmitting electrodes is coated with Parylene.

13. (Previously Presented) The system of claim 3, wherein the surface of the sensor is made of a conductive material harmless to the human body.

14. (Original) The system of claim 13, wherein the conductive material is SUS316L or gold.

15-38. (Canceled)

39. (Currently Amended) A [[In a]] method for transmitting a signal from a capsule type endoscope put in the human body to the outside of the human body~~, a method for data communication in the human body,~~ the method comprising ~~the steps~~:

generating electric potential difference between first and second transmitting electrodes installed on the surface of a capsule type endoscope;

supplying a conduction current from [[a]] the first transmitting electrode having a higher electric potential to the inside of the human body to flow the current through the surface of the human body back into the inside of the human body and sinking the current to [[a]] the second transmitting electrode having a lower electric potential; and

inducing a voltage between receiving electrodes installed on the surface of the human body by the current flowing through the surface of the human body.

40. (Original) The method of claim 39, wherein the capsule type endoscope makes a current flow from one transmitting electrode to the other transmitting electrode when a signal to be transmitted is a digital signal "1" and makes a current flow from the other transmitting electrode to one transmitting electrode when a signal to be transmitted is a digital signal "0."

41. (Original) The method of claim 39, wherein a size of the current is limited by connecting resistance serially to the transmitting electrode respectively.

42. (Original) The method of claim 41, wherein a capacitor is connected to each resistance in parallel.

43. (New) The method of claim 1, wherein the generating the electric potential difference comprises controlling the output of the transmitting electrodes to be transmitted to the outside of the human body by a switching circuit.

44. (New) The method of claim 43, wherein the controlling the output of the transmitting electrodes comprises switching an input signal to the transmitting electrodes by the switching circuit, such that:

a positive is represented as a first state when the first transmitting electrode having a higher electric potential and the second transmitting electrode has a lower electric potential; and

a negative is represented as a second state when first transmitting electrode having a lower electric potential and second transmitting electrode has a higher electric potential.

45. (New) The method of claim 44, further comprising supplying the conduction current in a digital form.

46. (New) The method of claim 45, further comprising inducing a digital voltage between receiving electrodes installed on the surface of the human body by the conduction current flowing through the surface of the human body.